

What is claimed is:

1. A semiconductor memory device comprising:
a dielectric film;
first and second wiring lines provided in said dielectric film;
- 5 a copper fuse section provided in said dielectric film, and connected to said first and second wiring lines; and
an opening formed to said copper fuse section through said dielectric film, wherein a laser beam is
10 irradiated to said copper fuse section through said opening in an oxygen atmosphere.
2. A semiconductor memory device according to claim 1, wherein said dielectric film has a thermal endurance of 350 °C or above.
3. A semiconductor memory device according to claim 1, wherein said dielectric film has a relative dielectric constant equal to or lower than 4.
4. A semiconductor memory device according to claim 1, wherein at least one of said first and second wiring lines is formed of copper.
5. A semiconductor memory device according to claim 2, wherein at least one of said first and second

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a3

wiring lines is formed of copper.

6. A semiconductor memory device according to claim 1, wherein said copper fuse section is connected to said first wiring line via a first conductive plug and to said second wiring line via a second conductive plug.

Sub 24

7. A semiconductor memory device according to claim 1, wherein said dielectric film includes a first dielectric film and a second dielectric film on the first dielectric film, said copper fuse section being formed on said first dielectric film, and said semiconductor memory device further comprises a third wiring line formed of copper on said first dielectric film.

8. A method of converting a fuse section into a high resistance section, comprising:
providing a copper fuse section in a dielectric film, an opening is formed to said copper fuse section through said dielectric film; and
irradiating a laser beam to said copper fuse section through said opening such that said copper fuse section is oxidized.

9. A method according to claim 8, wherein said

irradiating includes:

irradiating said laser beam to said copper fuse section in an oxygen atmosphere.

10. A method according to claim 8, wherein said irradiating includes:

irradiating said laser beam to said copper fuse section such that said copper fuse section is not
5 increased to 350 °C or above in temperature.

11. A method according to claim 8, wherein said irradiating includes:

chopping said laser beam; and
irradiating said chopped laser beam to said
5 copper fuse section.

12. A method according to claim 8, wherein said irradiating includes:

irradiating said laser beam to said copper fuse section such that a relative dielectric constant of
5 said dielectric film is not substantially changed before and after the oxidization of said copper fuse section.

13. A method according to claim 8, wherein said dielectric film has a thermal endurance of 350 °C or above.

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14. A method according to claim 12, wherein said dielectric film has said relative dielectric constant equal to or lower than 4.

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